

This is a repository copy of *Anglo-Saxon settlements and archaeological visibility in the Yorkshire Wolds*.

White Rose Research Online URL for this paper:

<https://eprints.whiterose.ac.uk/1172/>

Book Section:

Richards, J.D. orcid.org/0000-0003-3938-899X (2000) Anglo-Saxon settlements and archaeological visibility in the Yorkshire Wolds. In: Geake, H. and Kenny, J., (eds.) *Early Deira: Archaeological studies of the East Riding in the fourth to ninth centuries AD*. Oxbow Books , Oxford, UK , pp. 27-39.

Reuse

Items deposited in White Rose Research Online are protected by copyright, with all rights reserved unless indicated otherwise. They may be downloaded and/or printed for private study, or other acts as permitted by national copyright laws. The publisher or other rights holders may allow further reproduction and re-use of the full text version. This is indicated by the licence information on the White Rose Research Online record for the item.

Takedown

If you consider content in White Rose Research Online to be in breach of UK law, please notify us by emailing eprints@whiterose.ac.uk including the URL of the record and the reason for the withdrawal request.

4 Anglo-Saxon Settlements and Archaeological Visibility in the Yorkshire Wolds

Julian D. Richards

Summary

Rural Anglo-Saxon settlements in the hinterland of York are notoriously invisible. As a result of major urban rescue archaeology campaigns in the 1970s, more could be inferred about Anglo-Saxon Yorkshire from finds in York than from rural sites. That picture is gradually changing. During the last ten years, research on two sites in the Yorkshire Wolds – Wharram Percy and Cottam – now allows us to explain this invisibility, and to characterise settlements of this period. This paper describes how a battery of archaeological techniques, including aerial photography, resistivity, magnetometry, fieldwalking, excavation, and collaboration with metal-detectorists have been used in combination to identify and map these sites, with Geographical Information Systems (GIS) used to integrate the information. The conclusion to be drawn is that early medieval sites are not so much invisible as hitherto unrecognised, and the foundations have now been laid for a programme of identification based upon remote sensing and cropmark morphology.

Introduction

The Yorkshire Wolds are rolling chalk uplands in eastern Yorkshire. They are bounded to the north by the Vale of Pickering, to the west by the Vale of York, and to the south-east by the Holderness plain. One arm extends directly south as far as the Humber estuary which, from around the seventh century AD, appears to have formed the southern boundary of the early medieval kingdom of Northumbria. To the north-east the Wolds extend as far as the North Sea coast at Flamborough Head. The underlying chalk geology results in little surface drainage, although there are a number of dry valleys which are thought to date from an ancient glaciation. There is one substantial watercourse, the Gypsy Race, which rises not far from the medieval settlement at Wharram Percy, and flows down the Great Wold Valley into the North Sea at the modern seaside town of Bridlington. Today the Wolds are lightly populated, with settlement mainly

in dispersed farms and villages. The thin chalk soils are largely given over to arable farming, although both cows and sheep are also grazed on the uplands. There are market towns at Malton and Driffield, lying off the chalk to the north-west and south-east respectively, but the nearest major urban centre is the city of York, which lies some twelve miles (c. 20 km) from the western Wolds edge.

The Wolds appear to have been extensively farmed from at least the middle Bronze Age. There are numerous round barrows, but the most significant features from this period are the linear earthworks which divide the landscape into large territories. It was in the late Iron Age, however, that the Wolds became fully settled. Mapping of cropmarks from aerial photographs reveals a landscape dissected by ancient trackways and partitioned by extensive field systems. Many of these form so-called 'ladder patterns', comprising series of rectilinear fields or paddocks defined by ditches and often fronting onto a trackway, with occasional settlement enclosures. That this landscape is pre-Roman is clearly demonstrated south of Wharram-le-Street, where the Roman road south of Malton cuts obliquely across the field systems and trackways. Where such ladder settlements have been excavated, as at Wharram Percy, a late Iron Age origin has been confirmed, although they have generally been shown to continue in use into Romano-British times (Beresford and Hurst 1990, 87–92). The spacing of the settlements is generally every half-mile (1 km), shown for example along the Thixendale valley, where there are medieval villages every mile (1.6 km) with Romano-British farms halfway between (Beresford and Hurst 1990, 92). The trackways look like cattle droveways and the paddocks may have served as animal enclosures, although excavation of some of the medium-sized local villas and their associated corn-drying ovens shows that cereal crops were also already important by the Roman period.

The immediate post-Roman settlement pattern of the Wolds is much less well understood. Ancient pollen does not survive well on the chalk soils, but most environ-

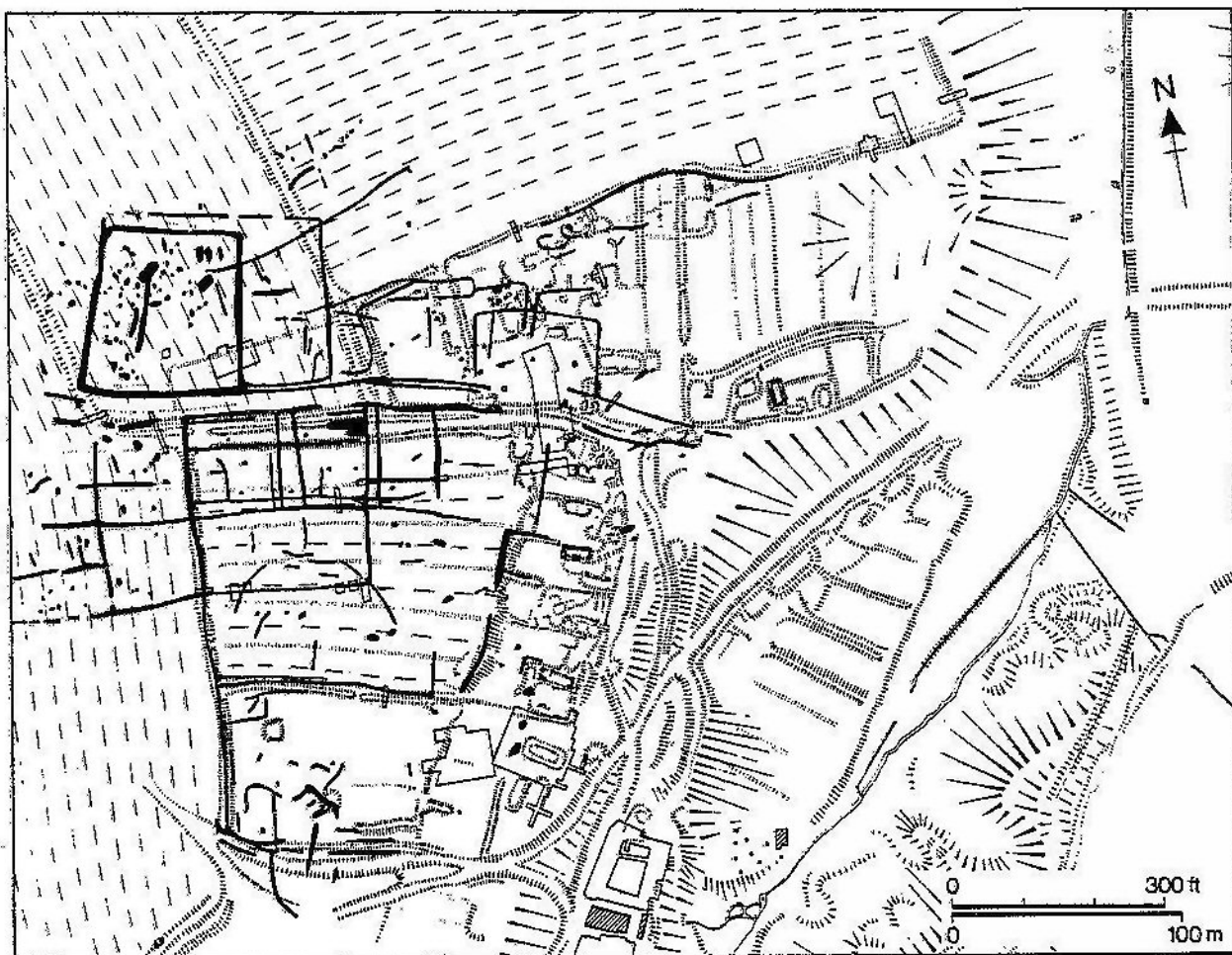


Fig. 4.1: Plan of Wharram Percy: the results from a magnetometer survey conducted by the Ancient Monuments Laboratory, English heritage, superimposed over the earthwork plan (C. Philo)

mental archaeologists assume that the Wolds landscape remained largely cleared and that there was no extensive reafforestation. Nevertheless, there are no securely dated early Anglo-Saxon settlement sites from the Wolds (Watkins 1983). Early Anglo-Saxon cemeteries have been excavated on the western Wolds edge at Sancton (Myres and Southern 1973; Timby 1993), and to the east at Sewerby (Hirst 1985), but only isolated burials are known from the Wolds tops. To the north, the Anglo-Saxon cemetery and extensive settlement at West Heslerton (Powlesland *et al.* 1986) lies just off the chalk, at the southern edge of the Vale of Pickering. During what is known as the 'Final Phase' of pagan burial, in the seventh and early eighth centuries, there was a trend towards highly visible burials in the Wolds, often re-using prehistoric barrows, such as at Garton II and Uncleby (Mortimer 1905, 247–257; Smith 1912). Few middle Anglo-Saxon settlements have been excavated, although post-built structures have been discovered at Thwing

where occupation debris, including sceattas and stycas, indicates activity from the eighth century onwards (Manby forthcoming). Northumbrian stycas found within some of the buildings at West Heslerton suggest that this site was also occupied in the eighth century. As witness to the ninth-century Danish settlement there are large numbers of Scandinavian-type place-names, but until recently there was scant archaeological evidence for Viking Age farmsteads in the Wolds. York may have been a thriving and cosmopolitan trading centre from the early eighth century onwards (Kemp 1996; Hall 1994), but its hinterland was virtually unknown.

Archaeological investigation of two Wolds settlements at Wharram Percy and Cottam, neither of which would originally have been expected to yield Anglo-Saxon archaeology, has now begun to indicate extensive Wolds settlement in the Anglo-Saxon period. These sites help us begin to characterise rural settlement and to identify its defining traits.

Wharram Percy

Wharram Percy is better known for the campaign of excavations aimed at understanding the desertion of the later medieval village, pioneered by Beresford and Hurst (1990). Maurice Beresford was first drawn to Wharram Percy in June 1948 by a note of a "Site of Village" on an Ordnance Survey map. Beresford was familiar with lost, or "deserted" medieval villages as they were to become known, from the Midlands, where worn hollow ways defined upstanding house platforms. In the Midlands, however, the houses were constructed of wood, wattle and daub, and left little visible trace. At Wharram Percy, Beresford found an astonishing array of earthworks representing stone house foundations which had deterred the plough and ensured the preservation of complete toft and croft plans (Beresford and Hurst 1990, 20–22). Beginning in 1952, an extensive programme of excavation has thrown light on the development and desertion of the medieval village and its church.

As part of this fieldwork programme, geophysical survey of Wharram Percy by the Ancient Monuments Laboratory unexpectedly revealed a completely different and hitherto invisible landscape (Fig. 4.1), following a major east-west axis in contrast to the medieval north-south alignment (David 1982). Trial trenching revealed that the major enclosures were late Iron Age, with alterations in the Roman period. In the area of what was to become the later medieval North Manor house the location of a major Iron Age farmstead has been revealed (Beresford and Hurst 1990, 69–71). Neither remote sensing nor earthwork survey, however, would have led the investigator to suspect that there was just as substantial a phase of Anglo-Saxon occupation at Wharram Percy.

It was only through trial excavation that middle Anglo-Saxon activity was revealed, spread over much of the area of the later medieval village (Fig. 4.2). It is significant, however, that none of the excavations were aimed at the discovery of Anglo-Saxon settlement, and nor did they generally expect to find it. In 1975, a two-post sunken-featured building was excavated at Site 39, whose purpose was to establish the form and date of the North Manor enclosure bank (Milne and Richards 1992, 5). The finds from its fill included a Northumbrian sceat of c. 750, and a sherd of Tating-type ware of the late eighth or early ninth centuries.

During 1980–84 two sunken-featured buildings were identified cut into a Roman hollow way in Site 60, in a trench intended to examine the area immediately south of the North Manor (Rahtz *et al.* in prep). These were originally described as sixth-century (Hurst 1984, 82), largely on the basis of a strike-a-light for which sixth-century parallels were quoted, but it has been suggested that they could also be later (Milne and Richards 1992, 93).

In 1989 a 3m x 10m trench (Site 94) was excavated at the intersection of field boundary ditches to the south of

the late Iron Age ladder settlement. It was hoped that the trench would confirm the presence of a curvilinear enclosure, but in the event the fill contained predominantly Anglo-Saxon material, including copper-alloy metalworking debris. When, in the next season, a 4m x 4m section (Site 95A) was excavated across an Iron Age field boundary ditch in order to recover more Anglo-Saxon midden material from the backfill, it recovered instead the outline of a fourth sunken structure cut into the Romano-British ditch (Milne and Richards 1992, 13–25). Further middle Anglo-Saxon finds have been made in other parts of the Guardianship area, including an eighth-century cross fragment, a styca and a ninth-century strap-end from Site 12, on the plateau immediately above the church, and a number of stycas and sceattas from the church excavation itself.

The most intensive middle Anglo-Saxon occupation, however, was on the site of the later medieval South Manor house, where a middle Anglo-Saxon timber hall and smithy have been excavated. This is the only site at Wharram Percy which was excavated with the explicit aim of examining continuity from the Romano-British to the medieval period, although it originated when a 1977–78 trench (Site 44) searching for the medieval manorial block unexpectedly recovered several dozen sherds of Anglo-Saxon pottery (Stamper and Croft 1997).

During the middle Anglo-Saxon period there is also evidence for the first post-Roman laying-out of boundaries, and enclosure of the landscape, at Wharram Percy. Two middle Anglo-Saxon boundary ditches were recovered from the South Manor excavations; both ran east-west, the second apparently replacing the first (Stamper and Croft 1997).

The significant feature about Anglo-Saxon Wharram Percy is that, despite settlement during the Anglo-Saxon period apparently being as extensive as during both the earlier Romano-British and later medieval period, it seems invisible to both geophysics and aerial photography. At many Anglo-Saxon sites it has proved possible to recognise sunken-featured buildings from both aerial photography (Jones and Jones 1975) and magnetometer survey (David 1994). Despite the fact that the Wolds chalk gives an exceptionally good magnetic response (David 1994, 14) none of the four known sunken-featured buildings are distinguishable on the magnetometer survey, for the simple reason that they had been cut into earlier negative features, presumably as a deliberate policy in order to avoid having to dig into bedded chalk.

An indication that there was Anglo-Saxon settlement in the neighbourhood of Wharram Percy might have been expected, even in the absence of excavation, from the pottery recovered during fieldwalking in adjacent fields. The local early medieval handmade wares are, however, notoriously undiagnostic and, unless decorated, are very hard to distinguish from local Iron Age wares. The success of the Wharram Research Project in identifying undecorated Anglo-Saxon pottery from fieldwalking was



Fig. 4.2: Plan of the village of Wharram Percy, showing areas of Anglo-Saxon Activity (C. Philo)

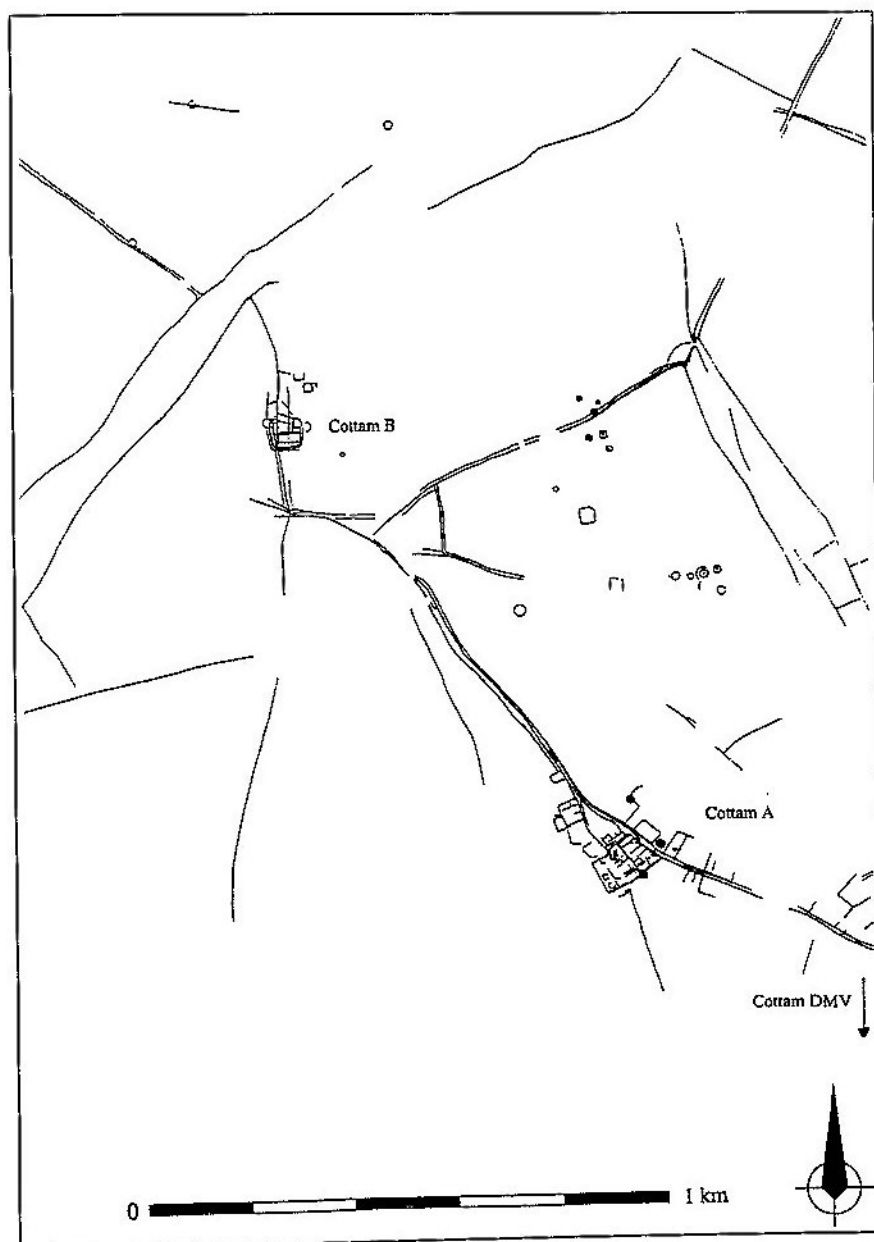


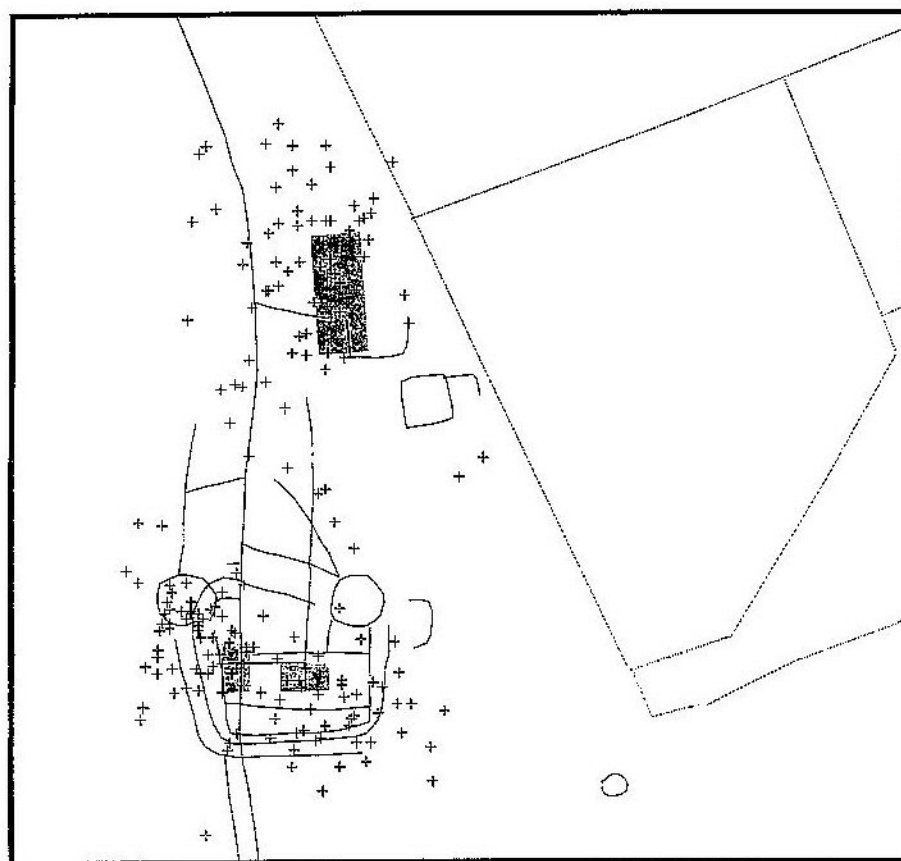
Fig. 4.3: Plan of the cropmark enclosures of Cottam A and Cottam B

unusual, and entirely due to the comparison of this material with the excavated pottery assemblages (Hayfield 1987, 27–28).

In addition, Anglo-Saxon Wharram Percy would probably not have been located by metal-detector, as it is thickly covered by the extensive medieval earthworks which have discouraged ploughing and put early medieval metalwork beyond the signals of detectors. Its copper-alloy finds profile, however, is not significantly different to that of a “productive” site (Richards forthcoming).

Cottam

Cottam parish also contains a (lesser-known) deserted medieval village. Although it has never been the subject of excavation, it too may hide the remains of an Anglo-Saxon precursor. North of the DMV and not far from Burrow House Farm, however, an extensive Anglo-Saxon settlement *has* been excavated. Its existence came to light as a result of the discovery, over many years, of large numbers of Anglian and Anglo-Scandinavian artefacts by metal-detector users. From 1987 to 1989 some two



ARC/INFO 7.1; J.D. Richards 1997; finds database: T. Austin, C. Buckley & J. Kenny

0 100 m



Fig. 4.4: Cottam B, showing the location of excavation trenches in relation to metal-detector finds, the aerial photographic plot and modern field boundaries

hundred man-hours of searching yielded over sixty pieces of eighth and ninth-century date (D. Haldenby pers comm). The findspots have been systematically recorded, and the objects have been published (Haldenby 1990, 1992, 1994). Some of the metal items are quite corroded, having suffered from agricultural disturbance, whereas others are still in a good state of preservation and appear to have been ploughed up in recent years. To date the published finds include some forty simple pins, as well as disc-headed and racket-headed pins, a lead-alloy brooch, over thirty ninth-century strap-ends, a gilt copper-alloy mount, a fragment of rolled gold sheet, over twenty ninth-century stycas, and numerous Roman coins. There is also evidence of domestic activity, including eight lead spindle whorls and some forty iron knife blades. The Anglo-Scandinavian finds include two Jellinge-style brooches and two so-called Norse bells. A chalk weight with a possible ship graffito has also been recovered from the ploughsoil (Richards 1994b).

The quantity of copper-alloy objects recovered has led to the site being described as "productive" (Leahy this volume.), although I have argued elsewhere (Richards forthcoming) that the term is unhelpful and masks a range of variability of Anglo-Saxon settlement forms. The metal-detectorists did not make any systematic attempt to recover non-metal artefacts, although they acknowledge that substantial quantities of both pottery and bone were observable in the ploughsoil.

The metal-detector users had been drawn to this area by a sub-rectangular cropmark enclosure in the eastern part of the field, henceforth described as Cottam B. This does not appear to be linked with an associated field system, but instead appears to sit astride a trackway, which skirts the dry valley and then runs south-east to a cropmark ladder pattern enclosure, known as Cottam A, and then further south to the earthworks of the DMV (Fig. 4.3).

The metal-detector users have now intensively worked

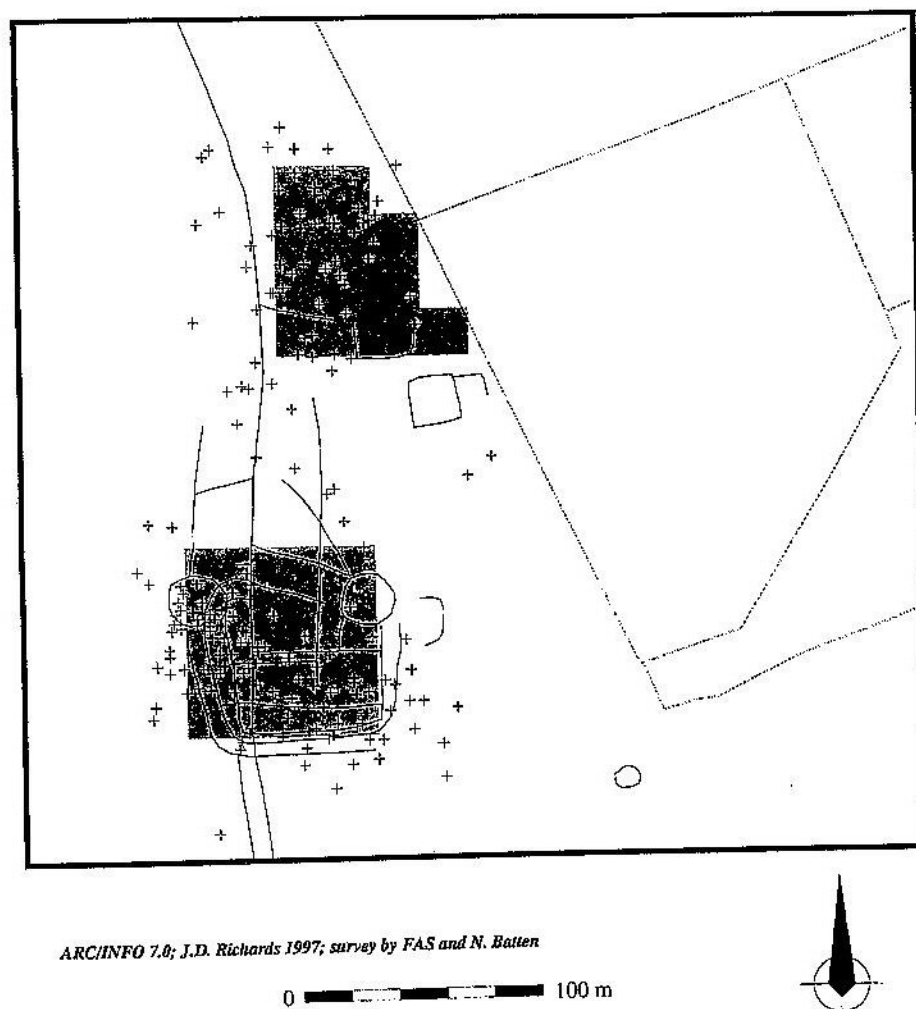


Fig. 4.5: Cottam B, showing the location of geophysical surveys in relation to metal-detector finds, the aerial photographic plot and modern field boundaries

the fields around Cottam, both on and away from the cropmarks. If the distribution of the metal-detector finds at Cottam B is plotted there appear to be two foci (Fig. 4.4). The southern concentration coincides with the sub-rectangular ditched enclosure, whilst the second focus to the north is less clearly associated with other features.

Plotting the position of datable metal objects suggests that there is a difference in date between the two clusters, with most late eighth-century finds towards the south, and late ninth and tenth-century finds in the northern cluster. Fieldwalking has confirmed the picture derived from the distribution of metal-detector finds (Didsbury 1990), and shows that there is a general background distribution of Roman potsherds across the field, whereas Anglo-Saxon sherds are concentrated towards the east. The Torksey ware sherds, which are not current before the tenth century, are particularly focused towards the north-east, which is where the tenth-century metal finds are clustered.

This localised shift has been further confirmed by excavation (Fig. 4.4). In 1993, two trenches dug across the southern enclosure revealed post-hole buildings and settlement debris of the eighth and early ninth centuries (Richards 1994a). To the east of one of the buildings was a circular pit, c. 1.5 m in diameter, towards the middle of which was an adult female skull, radiocarbon dated to 1295 ± 60 BP (which gives a calibrated range of 664–775 AD at the 68% confidence limits). The fill of the pit also contained a silver penny of Aethelberht of Wessex dated to 858–862, an Anglo-Saxon hooked tag and two decorated comb fragments. The contents of the pit were sieved, yielding bones of frogs and water voles which must have stumbled into it whilst it lay open. By this stage, therefore, some time in the late ninth century, it is proposed that this area of the site had been abandoned.

Neither magnetometer or resistivity survey on their own would have helped identify Cottam B (Fig. 4.5). Both techniques revealed some of the enclosure ditches,



Fig. 4.6: Cottam B: magnetometer survey of the Anglo-Saxon enclosure

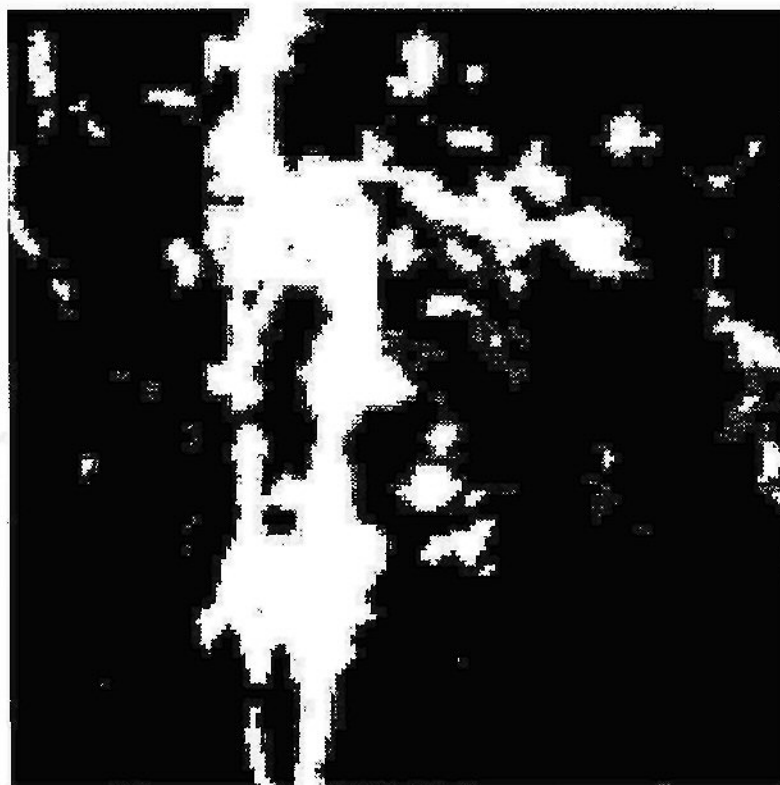


Fig. 4.7: Cottam B: resistivity survey of the Anglo-Saxon enclosure



Fig. 4.8: Cottam B: combined magnetometer and resistivity data from the Anglo-Saxon enclosure

although neither provided a complete plan (Figs. 4.6 and 4.7), and it was only through a combination of magnetometer and resistivity results using GIS software that this was achieved (Fig. 4.8). Neither technique revealed the post-hole buildings, and although the circular pit was visible, it was undiagnostic and it was only through excavation that it was datable. At West Heslerton, Powlesland has used magnetometry to good effect to provide the plans of Anglo-Saxon post-built halls, but this was only achieved by carrying out the survey after ploughsoil removal and at a resolution of 0.25m x 0.25m (Lyall and Powlesland 1996).

In 1995 our attention turned to the area of the northern metalwork concentration where, despite the lack of cropmarks, the fieldwalking and metal-detecting suggested that there had been occupation. Magnetometer survey was therefore carried out, revealing well-defined ditched enclosures and trackways in this area which did not appear as cropmarks (Fig. 4.9). Subsequent excavation revealed a number of rectangular enclosures, enclosing post-hole buildings, either side of a trackway which would have been entered through a massive ditched and banked gateway. Other than the entrance way, however, the enclosure boundary ditches were not deep enough to affect crop growth, in some cases being as shallow as 0.1 m. The magnetometer survey, carried out at a resolution of 0.5m x 0.25m, had detected the ditches, as well as an episode of deep ploughing carried out

according to a regular pattern, but had not distinguished irregularly spaced and truncated post-holes.

It appears, therefore, that during the ninth century the settlement had been relocated to the north. On the basis of the pottery, occupation appears to have been relatively short-lived, perhaps spanning some fifty years or a single generation only, from the late ninth to early tenth century. It is proposed that at that point settlement shifted again, probably to the site of the deserted medieval villages at Cowlam or Cottam, although this theory is as yet untested by excavation.

At Cottam A, the metal-detectorists had recovered Romano-British objects and a more limited range of Anglian and Anglo-Scandinavian metal finds, both coincident with the area of the cropmark enclosure (D. Haldenby pers comm). Fieldwalking of the site yielded large quantities of Roman pottery, but very little Anglo-Saxon pottery. In 1996 excavation of part of the cropmark enclosure revealed a typical Romano-British farmstead. On the basis of artefactual evidence, the major field boundaries all clearly dated to the Romano-British period. Only one feature (a small pit) could be dated to the Anglo-Saxon period on the basis of a solitary ninth-century strap-end. The Anglian and Anglo-Scandinavian artefacts recovered by metal-detectorists in this area are therefore interpreted as representing activity, but not permanent settlement. It appears that the prehistoric trackway was still a landscape feature, and would have been used by

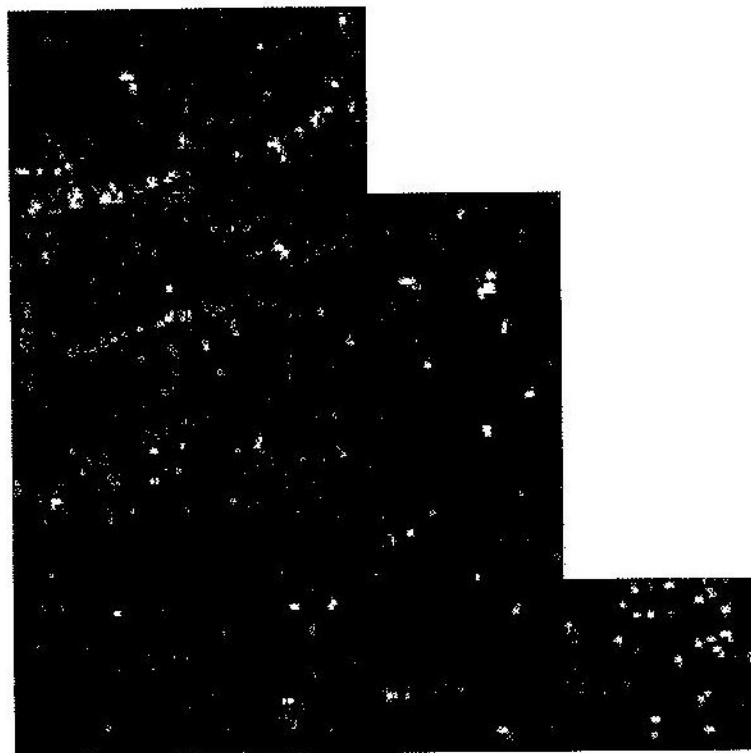


Fig. 4.9: Cottam B: magnetometer survey of the Anglo-Scandinavian enclosures

Anglo-Saxon or Scandinavian settlers travelling between their farms at Cottam B and any contemporaneous settlement under the site of the Cottam DMV. Such farmers may have driven their animals along this route, and may have taken advantage of the opportunities provided for watering at the quarry holes which excavation has revealed were still open at Cottam A.

In summary, the three seasons of excavation at Cottam have revealed a shifting and evolving early medieval settlement pattern. It is difficult to escape the conclusion that the sub-rectangular enclosures at Cottam B represent Anglian and then Anglo-Scandinavian farmsteads, whilst the more traditional ladder-pattern farmstead at Cottam A is confirmed as late Iron Age and Romano-British. This work may therefore allow a reassessment of the typology of cropmark enclosures. It has been noted above that many of these are assumed to be Romano-British, and many more are completely undated. A trawl for undated cropmark enclosures in the Cottam environs in the former Humberside Sites and Monuments Record reveals a number of possible candidates for Anglo-Saxon settlement (Fig. 4.10). By no means all of these sites will be Anglo-Saxon but the criteria now exist against which they can be assessed. Similarly, looking in the broader hinterland of York, and pooling information on undated enclosures from the Sites and Monuments Records of the three adjacent counties of North Yorkshire, West Yorkshire, and Humberside, there is a large number of known but undated

enclosures (Fig. 4.11). It is anticipated that far more may turn out to be of Anglo-Saxon rather than of Iron Age or Romano-British date.

Conclusion

At both Cottam and Wharham Percy there is evidence for the origins of Anglo-Saxon settlement in the late seventh or eighth century, with subsequent re-organisation in the tenth century, although we should not seek a single pattern of settlement evolution as development took a different course at each site. The early medieval activity at Wharham Percy was only discovered because the village had ultimately been abandoned, and the site became the focus of a large campaign to examine the desertion of the later medieval settlement, with unexpected results. Anglo-Saxon Wharham Percy is invisible to aerial photography and geophysics and, were it not for the excavations prompted by Beresford and Hurst, might only have been discovered if the site had been deep-ploughed and subjected to intensive metal-detecting. Cottam B was discovered only because of the association of Anglian and Anglo-Scandinavian metal artefacts with cropmark enclosures. It has, however, enabled us to identify a category of sub-rectangular cropmark enclosures, separate from the ladder settlements, which is of Anglo-Saxon date. The Ancient Monuments Laboratory magnetometer survey of Butterwick in the Great Wold Valley (David

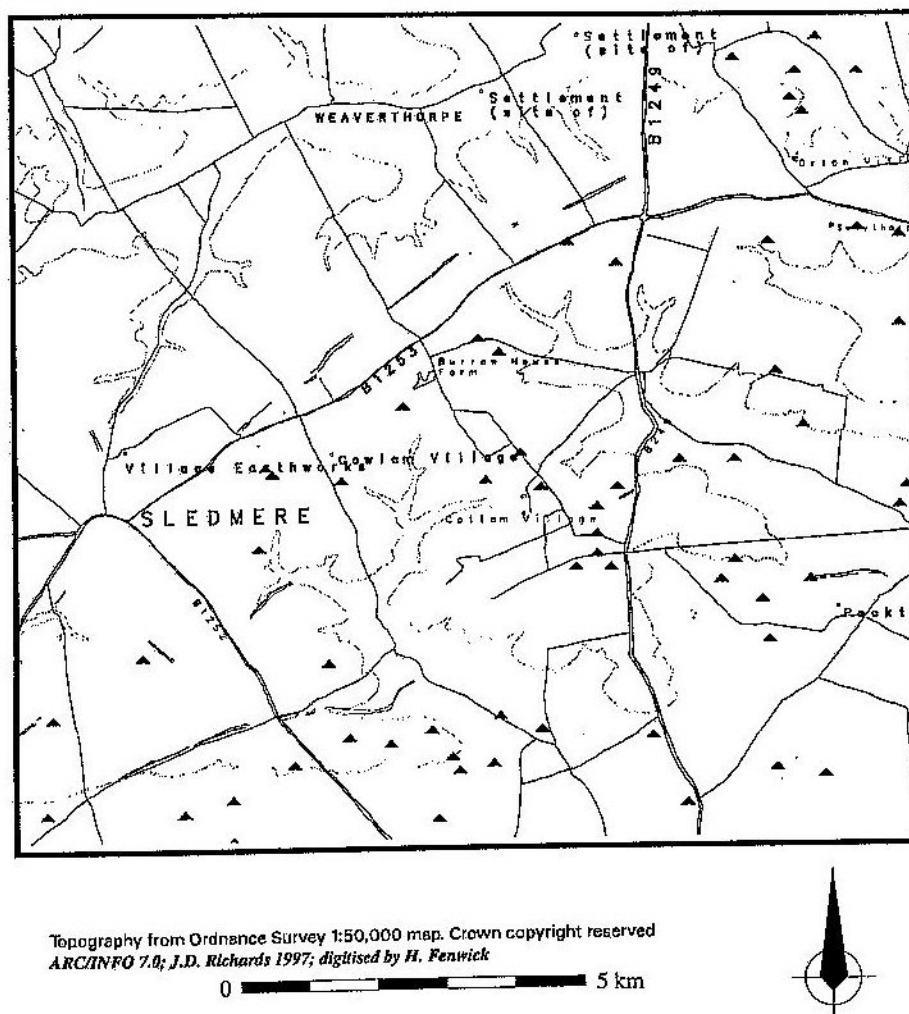


Fig. 4.10: Undated cropmark enclosures in the Cottam area (data derived from the Humberside Sites and Monuments Record)

1994, 13–14) appears to indicate enclosures which are similar to those from Cottam B, as well as to West Heslerton [cross ref to Dominic's paper]. It is proposed that there may be many more early medieval settlement sites awaiting recognition in the Yorkshire Wolds.

Acknowledgments

The results from Wharram Percy discussed in this paper are from the Wharram Research Project conducted on behalf of English Heritage, the Medieval Settlement Research Group and the Department of Archaeology, University of York, and under the overall direction of John Hurst and Maurice Beresford. The geophysics surveys were conducted by the Ancient Monuments Laboratory. The author was involved in the direction of the excavation a number of specific sites for the University of York between 1987 and 1990. The Anglo-Saxon features were published in 1992 (Milne and

Richards 1992). The outstanding Wharram Percy reports are currently being prepared for publication under the general editorship of Stuart Wrathmell.

The results from Cottam presented here form part of a project to investigate Anglian and Anglo-Scandinavian settlement patterns in Yorkshire, supported by the University of York and the British Academy. The 1993 Cottam evaluation was additionally supported by the Earthwatch Foundation USA. The 1993 excavation was co-directed by the author and Blaise Vyner; subsequent excavations were directly solely by the author, with assistance from Tony Austin. Thanks are due to the landowner, Mr Robert Bannister, and to David Haldenby and colleagues. The 1989 fieldwalking was carried out under the auspices of the Humberside Archaeological Unit by Peter Didsbury and members of the East Riding Archaeological Society. The 1993 and subsequent fieldwalking was carried out by students of the Department of Archaeology, University of York. The geo-

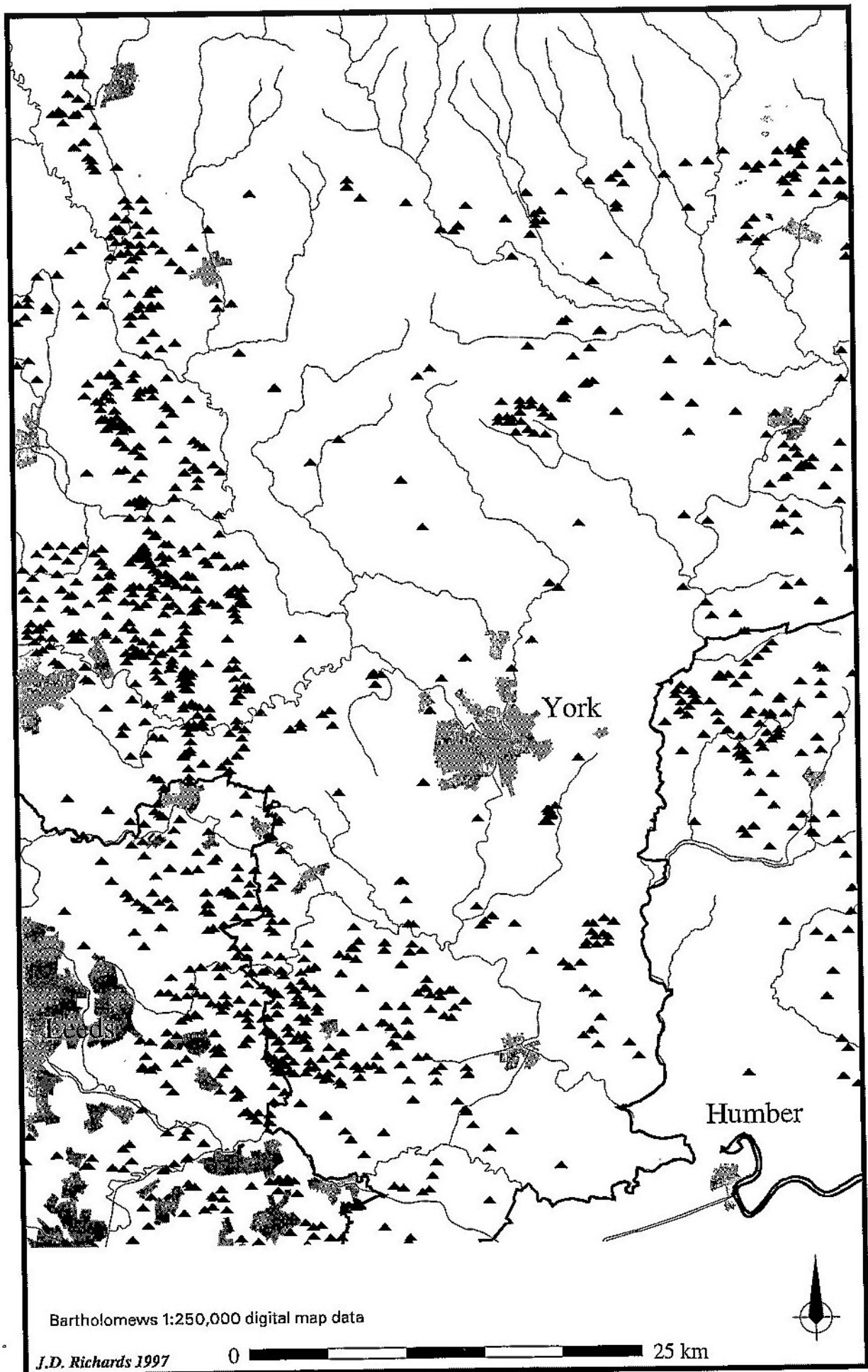


Fig. 4.11: Undated cropmark enclosures and settlement sites in the Vale of York (data derived from the Sites and Monuments Records of Humberside, North Yorkshire, and West Yorkshire)

physical surveys were conducted by Field Archaeology Specialists Ltd, also of the University of York. The project database was implemented by Tony Austin, Caroline Buckley and Jon Kenny. Aerial photographic plots were derived from Cathy Stoertz at RCHME. Additional digitising was conducted by Nigel Batten and Helen Fenwick. Other project data was extracted from the County Sites and Monuments Records of Humberside, North Yorkshire, and West Yorkshire. The project GIS was developed in ARC/INFO by the author, with assistance from Jeff Chartrand, Paul Miller and Peter Halls. The final reports on the excavations are currently in preparation.

Bibliography

- Beresford, M. W. and Hurst, J. 1990. *Wharram Percy: deserted medieval village* (Batsford and English Heritage, London)
- David, A. 1982. *Wharram Percy: report on geophysical surveys 1970-82* (Ancient Monuments Laboratory Reports Series No. 3959, unpublished)
- David, A. 1994. 'Geophysical survey in early medieval archaeology' *Anglo-Saxon Studies in Archaeology and History* 7, 1-26
- Didsbury, P. 1990. 'Fieldwork in Cottam and Cowlam parish' *Yorkshire Archaeological Journal* 62, 63-67
- Haldenby, D. 1990. 'An Anglian site on the Yorkshire Wolds' *Yorkshire Archaeological Journal* 62, 51-63
- Haldenby, D. 1992. 'An Anglian site on the Yorkshire Wolds - continued' *Yorkshire Archaeological Journal* 64, 25-39
- Haldenby, D. 1994. 'Further Saxon finds from the Yorkshire Wolds' *Yorkshire Archaeological Journal* 66, 51-56
- Hall, R. A. 1994. *Viking Age York* (Batsford and English Heritage, London)
- Hayfield, C. 1987. *An Archaeological Survey of the Parish of Wharram Percy, East Yorkshire* (British Archaeological Reports British Series 172, Oxford)
- Hirst, S. 1985. *An Anglo-Saxon Inhumation Cemetery at Sewerby, East Yorkshire* (York University Archaeological Publications 4, York)
- Hurst, J. G. 1984. 'The Wharram Research Project: results to 1983' *Medieval Archaeology* 28, 77-111
- Jones, M. U. and Jones, W. T. 1975. 'The crop-mark sites at Mucking, Essex, England' in R. Bruce-Mitford (ed) *Recent Archaeological Excavations in Europe* (Routledge and Kegan Paul, London)
- Kemp, R. 1996. *Anglian settlement at 46-54 Fishergate* (Archaeology of York 7/1, Council for British Archaeology, York)
- Lyall, J. and Powlesland, D. 1996. 'The application of high resolution fluxgate gradiometry as an aid to excavation planning and strategy formulation' *Internet Archaeology* 1, http://intarch.ac.uk/journal/issue1/lyall_index.html
- Manby, T. forthcoming. *Thwing, Paddock Hill: a Bronze Age and Anglo-Saxon site in East Yorkshire*
- Milne, G. and Richards, J. D. 1992. *Wharram, a Study of Settlement on the Yorkshire Wolds, Volume VII: two Anglo-Saxon buildings and associated finds* (York University Archaeological Publications 9, York)
- Mortimer, J. R. 1905. *Forty Years' Researches in British and Saxon Burial Mounds of East Yorkshire* (A. Brown and Sons, London)
- Myres, J. N. L. and Southern, W. H. 1973. *The Anglo-Saxon Cremation Cemetery at Sancton, East Yorkshire* (Hull Museum Publications 218, Hull)
- Powlesland, D., Haughton, C. and Hanson, J. 1986. 'Excavations at Heslerton, North Yorkshire, 1978-82' *Archaeological Journal* 143, 53-173
- Rahtz, P. A. et al. in prep. *Wharram, a Study of Settlement on the Yorkshire Wolds: the North Manor* (York University Archaeological Publications, York)
- Richards, J. D. 1994a. 'Cottam evaluation' *Yorkshire Archaeological Journal* 66, 57-58
- Richards, J. D. 1994b. 'An inscribed chalk weight from Cottam' *Medieval Archaeology* 38, 167-169
- Richards, J. D. forthcoming. 'What's so special about "productive sites?" Middle Saxon settlement types in Northumbria' *Anglo-Saxon Studies in Archaeology and History* 10
- Smith, R. A. 1912. 'The excavation by Canon Greenwell, FSA, in 1868, of an Anglo-Saxon cemetery at Uncleby, East Riding of Yorkshire' *Proceedings of the Society of Antiquaries of London* 24, 146-158
- Stamper, P. A. and Croft, R. A. 1997. *Wharram, a Study of Settlement on the Yorkshire Wolds, Volume VIII: the South Manor area excavations* (York University Archaeological Publications 10, York)
- Timby, J. 1993. 'Sancton I Anglo-Saxon Cemetery: excavations carried out between 1976 and 1980' *Archaeological Journal* 150, 243-365
- Watkins, J. R. 1983. 'The archaeology of Anglian East Yorkshire: a review of some published evidence and proposals for future fieldwork' *East Riding Archaeologist* 7, 25-39